

**WEST**

Generate Collection

L1: Entry 9 of 16

File: USPT

Nov 17, 1998

DOCUMENT-IDENTIFIER: US 5839117 A

TITLE: Computerized event-driven routing system and method for use in an order entry system

## DEPR:

If an ordered product is not available, a backorder window 402 preferably opens and provides the customer with four choices. He or she may order the quantity that is available and accept the backorder quantity to be shipped at a later time, order only the available quantity, choose to order an alternate or substitute offer (if one exists), or cancel the whole quantity of the original product. If the customer chooses to order a substitute, substitution window opens and displays a list of available substitutes. When an item is out of stock, either the item will automatically be substituted with the same item from a different vendor (for the same price), or a list of substitute items will be displayed. The customer may choose to substitute the original item with an item displayed in the list or choose from the list of alternate items.

## CLPR:

14. The method of claim 2, wherein the step of assigning an action comprises defining at least one of the actions to display a backorder window defining a plurality of backorder options.

## CLPR:

30. The computerized system as in claim 19, wherein the action assignment means comprises means for defining at least one of the actions to display a backorder window defining a plurality of backorder options on the display.

## CCOR:

705/27

## CCXR:

705/14

## CCXR:

705/26

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L1: Entry 11 of 16

File: USPT

Jan 27, 1998

DOCUMENT-IDENTIFIER: US 5712989 A

TITLE: Just-in-time requisition and inventory management system

## DEPR:

If the quantity available is determined to be less than the quantity requisitioned in step 260, host computer 10 then creates a warning message indicating a proposed backorder for a quantity equal to the difference between the quantity requisitioned (QTY) and the quantity available (QTY AVAIL). As will be discussed below, the CSR need not accept this backorder. Host computer then proceeds with pricing step 268.

## DEPR:

In block 234 of FIG. 4A, local computer 40 receives the data block transmitted from host computer 10. Local computer 40 will preferably remain in wait state 232 for only a fraction of a second, so that the display on monitor 41 will appear to be updated almost instantaneously to the CSR. The data (relating to pricing and backorder quantity) received from host computer 10 is then used to update the relevant line entries in the Requisition Item Table as shown in step 234. If an error code is found in the received data, local computer 40 displays Requisition Management data screen 68 with the relevant error code. A list of the various error codes and warning codes which local computer 40 can cause to be displayed is attached at Table XXIV. Only some of the three digit codes are applicable to the Requisition Management data screen 68. The CSR may now take steps to reconcile the values of stock on hand in JIT facility 51 for the requested item of product type 01 before sourcing of the line can proceed further. (For example, the CSR may attempt to adjust the inventory for this product, as will be described in detail below.)

## DEPR:

If no error codes are found in the transmitted data, local computer 40 will display Requisition Maintenance data screen 108 on monitor 41 as shown in step 237. (A sample Requisition Maintenance data screen is set forth in Table IV.) Requisition Maintenance data screen 108 will display the price transmitted by host computer 10 (UNIT PRICE) and any quantity which host computer 10 has proposed to place on backorder (QTY BCKORD). In addition to displaying the relevant quantities in the Requisition Item Table, local computer 40 also assigns a status code to each line of a requisition and displays it in the STATUS field in Requisition Maintenance data screen 108. The possible status codes and the algorithm for assigning them to a line of a requisition will be discussed in detail below.

## DEPR:

For items of product type 06 (an item owned by the Customer in JIT facility 51), sourcing does not require communication with host computer 10. Thus control in FIG. 4A passes from block 228 to block 240, where local computer 40 determines whether the quantity of the item requisitioned (QTY) is equal to or exceeds the quantity available (QTY AVAIL). If the quantity available is determined to be less than the quantity requisitioned in step 240, local computer 40 then creates a proposed backorder in step 242 for a quantity equal to the difference between the quantity requisitioned (QTY) and the quantity available (QTY AVAIL). As will be discussed below, the CSR need not accept this backorder. Local computer 40 then proceeds with step 244 (as it would if the quantity available is equal to or greater than the quantity

requisitioned.)

DEPR:

In step 244, local computer 40 display Requisition Maintenance data screen 108 on monitor 41, which will display any quantity which local computer 10 has proposed to place on backorder in addition to the relevant data in the Requisition Item Table. Local computer 40 also assigns a status code to each line of a requisition and displays it in the STATUS field in Requisition Maintenance data screen 108. Control then passes to block 245, where the system will cause a picking document to be printed out (as shown in step 246) on printer 43 if the CSR hits the F2 (Accept) key. This completes sourcing for an item of product type 06.

DEPR:

The status codes which appear in the STATUS field of each line on Requisition Maintenance data screen 108 will now be discussed. The status of a line begins as "R" (Requisitioned) when the line item is first created on Requisition Management data screen 68. After sourcing, the status of a line becomes "S" (Sourced). After acceptance of a sourced requisition, the status can change to "F" (Filled), "B" (Backordered), "P" (In Process) or "C" (Canceled). If there is sufficient inventory at the relevant location (which depends on the product type of the requisitioned item) to supply the requisitioned line item, the line will have the status of Filled. If there is not sufficient inventory at the relevant location to supply the requisitioned line item, the line will have the status of Backordered. If the CSR determines that such a backorder is unacceptable to the requisitioner, he can source the item elsewhere: e.g., an item carried at the JIT as type 01 can be changed for this order to an 03 and ordered from warehouse 30 for direct shipment to the requisitioner. Similarly, the CSR can look for the inventory at other Distributor warehouses if it is not currently available at the JIT facility 51 or at warehouse 30.

DEPR:

Control then passes to step 356, where (in this case) local computer 40 will update the STATUS field in the Requisition Item Table and the display shown on Requisition Maintenance data screen 108 to reflect receipt of the confirmation data block. The Distributor order number is also added to the Requisition Item Table and is displayed on Requisition Maintenance data screen 108 in the ORDER NBR field. If a line item (of product type 01 or 06) has any quantity on backorder, the status of that line will be a "B" for Backorder until the stock at JIT facility 51 is replenished. For line items of product type 01 or 06 where there is no backordered quantity, the status will now be "F" for Filled. For line items of product type 03 or 04, the status will now be "F" for Filled, "B" for Backordered or "C" for Canceled (e.g., if the product was discontinued) depending on the status code received in the data block.

DEPR:

The function of the F11 key from Requisition Maintenance data screen 108 is very similar to that of the F10 key, except that the F11 key relates to purchase orders for items of product type 01 or 06 that have been filled through backorder allocation. By hitting the F11 key (where the status of the line is Backorderd), host computer 10 transmits a backorder inquiry data block including the Customer Account Number, Requisition Number, line numbers, date and time to host computer 10. As described above in connection with a confirmation inquiry, when host computer 10 receives the backorder inquiry data block, it checks host database 20 to determine whether or not the backordered order has been filled and sends a backorder confirmation data block to local computer 40 similar to that described above. The receipt of this confirmation block will update the status code of the Requisition Item Table from "B" to "F" if the status has changed.

DEPR:

As discussed above, Requisition Maintenance data screen 108 indicates, for each line, the quantity of an item that has been delivered or received (QTY REC) as well as the quantity of the item on Backorder (QTY BCKORD). When items are received from either the Distributor or a third-party supplier into the

JIT facility 51, the CSR can use Requisition Maintenance data screen 108 to enter the receipts. By hitting the F5 key while the cursor is on the appropriate line, the CSR can change the value of the quantity received (QTY REC) to reflect shipments that have been received. Once all of the items in that line have been received, the status code will change to "D" for Delivered. Similarly, a backordered quantity (QTY BCKORD) will be reduced by the amount received once the various purchase or transfer orders for the items that were on backordered status are filled.

DEPR:

Upon receiving the transmitted data block, host computer 10 validates the data in the same manner as with a requisition and builds a transfer order in host database 20 indicating the quantity of items ordered, the quantity to be put on backorder, and the quantity to be cancelled. (The cancelled quantity refers to ordered items which the Distributor will not be shipping, e.g., discontinued items.) As with a requisition of an item of product type 03, a picking list will later be generated in Distributor warehouse 30 or the relevant Distributor warehouse for the items that host database 20 indicates are on hand so that the items can be shipped to JIT facility 51.

DEPR:

When backordered items have been received into stock, the CSR may allocate the received items among outstanding requisitions having a quantity on backorder for the received item or items.

DEPR:

By entering "BOAI" into the RESPONSE field of any data screen, the CSR causes local computer 40 to display the Backorder Inquiry data screen, a sample of which is shown in Table XXII. This data screen uses data in the Requisition Item Table in local database 50 to display the requisition numbers of requisitions having backordered items. This data screen also lists the part number, unit of measure, order quantity, backordered quantity and the available quantity (from the Plant Location Table) for each backordered item. The CSR can allocate received backordered items to a particular requisition by typing and entering an "S" in the SEL (Select) field adjacent the requisition number of the backordered item. This causes local computer 40 to display the Backorder Allocation data screen, a sample of which is set forth in Table

DEPR:

The CSR can use the Backorder Allocation data screen to allocate some or all of the received quantity of the backordered item (which will be reflected in the available quantity (AVAIL QTY) field of the relevant line item of the selected requisition.) The CSR enters the amount to be allocated in the allocated quantity (ALLOC QTY) field and hits the F2 (Accept) key. Local computer 40 then checks to see if the allocated quantity exceeds either the available quantity or the ordered quantity for that line item. If this is the case (or if the allocated quantity is less than 1) an appropriate error message is displayed on the Backorder Allocation data screen. If no error message is generated local computer 40 causes printer 43 to generate a picking document as described above unless the CSR has indicated that he does not wish to generate a picking list, which is indicated in the appropriate field of the Plant Location Table. After someone has picked the required items from the JIT facility and the quantities picked have been compared by the CSR to the quantities shown on the picking list, the CSR may again hit the F2 (Accept) key to accept the backorder allocation if the quantities agree. If the quantities do not agree the CSR can go to the Inventory Adjustment data screen and adjust the inventory as described in detail above.

DEPR:

If the product type is 01, after the CSR accepts the backorder allocation local computer 40 builds a data block including the account number, location code, requisition number, the part number, the quantity available, the allocated quantity and the unit of measure and sends this data block to the host computer 10. Host computer 10 then validates the received data, and if valid, updates its database records to reflect the reduction in the quantity

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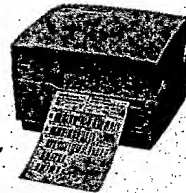


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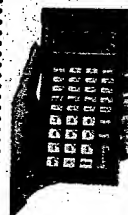
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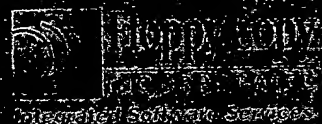
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